

CC*IIE Campus Design: Network Upgrade and Science DMZ to Enable High Performance Data Transfer

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Project Overview

- Installed direct fiber connection to I-Light, 10Gbs (upgrade from 1Gbps)
- Upgraded core network switches
- Connected science buildings at 10Gbps
- Created of Science DMZ

Benefits

- Improved network performance for research applications
 - Measured data transfer rate for one science driver increased 25x
- Additional undergrad research opportunities for students
- Increased engagement with institutional faculty
- Connection to regional network and broader research community



Sustaining Services

- Grant raised awareness of need, which helped to improve institutional funding
- Ample bandwidth opens possibilities for cost savings for enterprise services, which can be reallocated to sustain network performance
- Partnership with I-Light and DePauw University to add 2nd 10Gbps circuit in 2018
- Increased use of cloud services (e.g. AWS) for performance computing
- Challenges: bigger pipes bring higher costs; issues of scale at small schools